

# 2006 Technology Analyst Day

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# What You'll Hear Today

## Software

*Application optimization for overall productivity and satisfaction improvements*

## Architecture

*Direct connect architecture unlocking the true potential of multi-core*

## Process

*Fast, small, power-efficient submicron structures*

## Manufacturing

*Production speed, accuracy and agility*



Smarter Choice

The right solutions delivered at the right time.

Collaboration

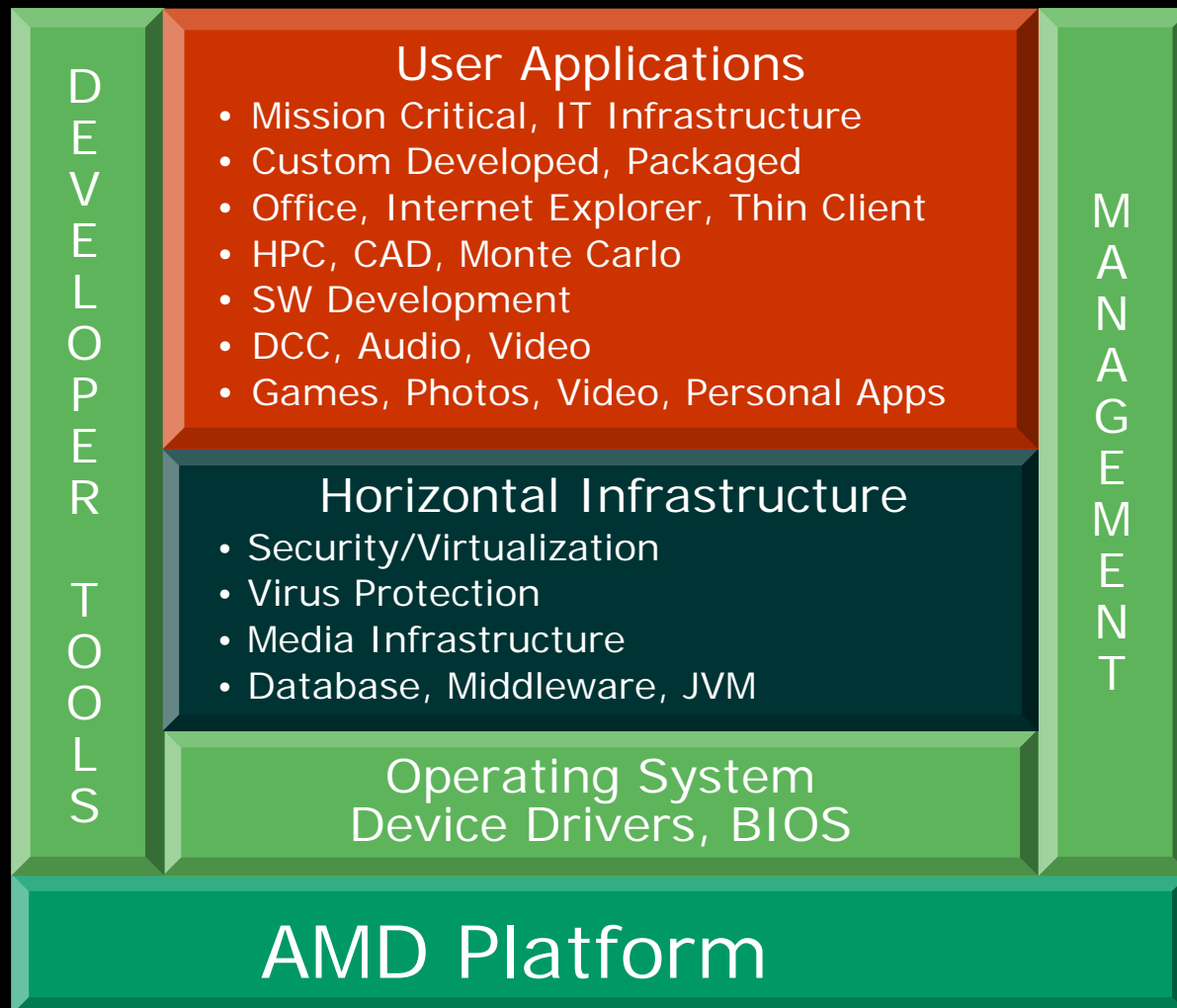
Better Customer Experience

Customers and End-Users

Collaboration



# Key Technology Focus Areas



# Software Ecosystem Partners



# AMD Operating System Research Center in Dresden

- Goals

- Drive silicon design to provide better architectures for modern operating systems
- Drive operating system excellence to customers through OS development
  - *Initially Linux focused*
- Drive several software/hardware technologies within OS
  - *Profiling and performance optimizations*
  - *Multiprocessor architecture support*
  - *Power management*
  - *Virtualization*
  - *System Management*
  - *Security*



*Being built and run  
by Chris Schlaeger,  
former VP of  
development at  
Novell/SuSE*

# Multi-faceted Developer Tool Strategy

## Libraries

NUMA- and core-aware  
Performance Libs  
(ACML, APML, libnuma)

## Commercial

SQLserver, DB2, SAP,  
eTrust, Hyperion,  
PowerCenter8, TIBCO

## JVMs

NUMA-aware threading,  
memory allocation, and  
garbage collection  
(Sun, BEA, IBM)

## Compilers

Auto and directed  
(OpenMP, MPI)  
multi-threading of Apps  
(PGI, MSFT, GCC, Sun)

## Profilers

Upcoming  
AMD tools for  
multi-threaded Apps on  
multi-node/multi-core

## Debuggers

Support multi-threaded  
Apps across multi-core  
& multi-node systems

## Hypervisor

Multi-core/Multi-node scheduling,  
Memory and Cache Affinity,  
SMP Guest Optimization  
(VMware, Xen, MSFT)

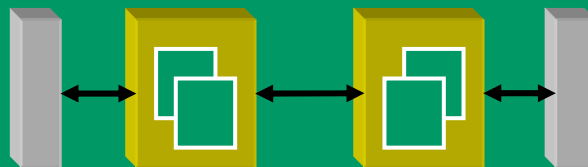
## BIOS

Key ACPI Data Structs:  
MADT, SRAT, SLIT  
SMP PowerNow!

## OS

Multi-core/Multi-node scheduling,  
Memory/Cache Affinity &  
Allocation, SMP PowerNow!  
(MSFT, Novell, RH, Solaris)

**AMD**  
Multi-core/  
Multi-node  
System



# Virtualization

## TODAY

- AMD Opteron™ provides the highest-performance x86 virtualization platform

## Q3-4 2006

- AMD Virtualization Technology simplifies and opens up virtualization to a larger software eco-system

## 2007

- AMD Virtualization Technology will provide even greater levels of performance & robustness
  - Performant fully-virtualized Guest OSes become a reality
  - “Nested Paging” and other enhancements will be supported by all major players

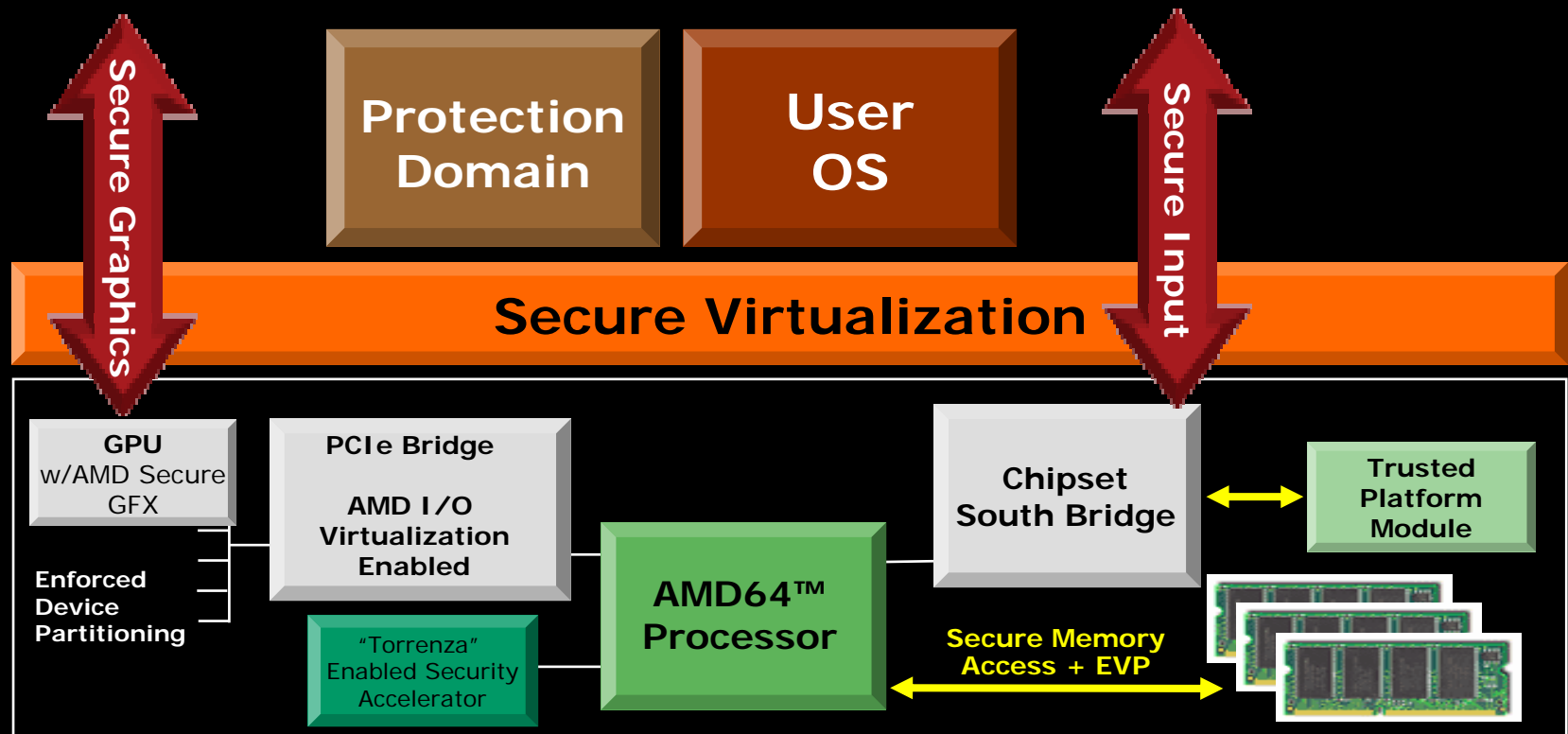
**Diane Greene**  
**President**

**VMware, Inc.**



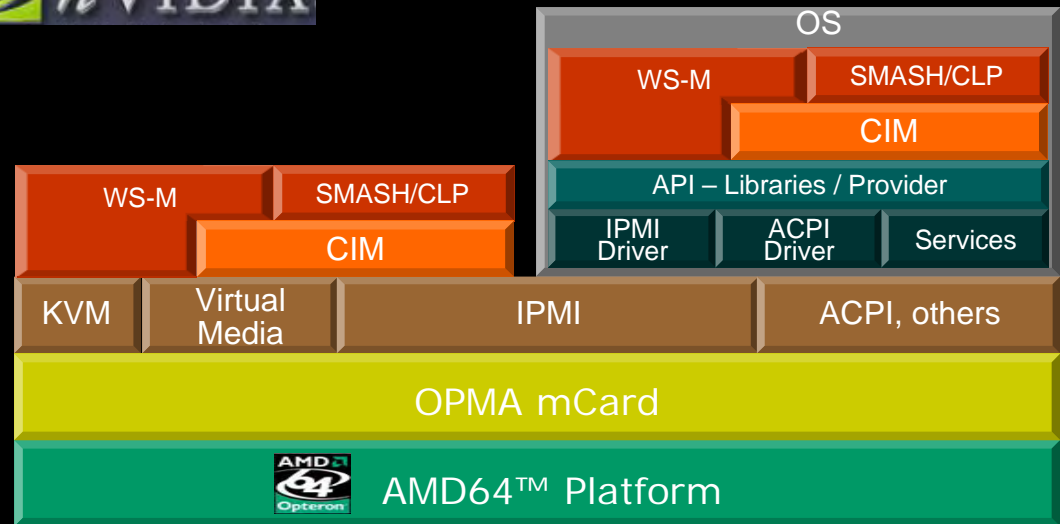
# Presidio Platform Security Vision

- Basis for a secure, trustworthy commercial client.
- Delivers the mechanisms to guard against malware, spyware, and other common attacks



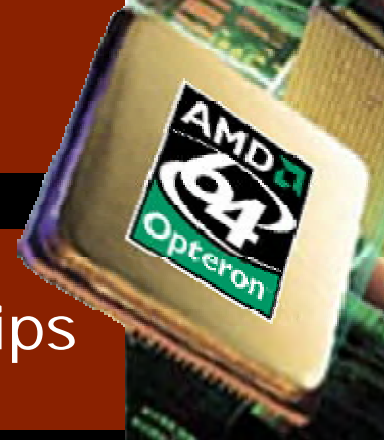
# System Management

- Standards driven by Distributed Management Task Force (DMTF)
- Open standards needed for ecosystem to work



# AMD Software Objectives

- Ensure a complete software ecosystem is available
- Ensure base software foundation is available for AMD processor-based platforms
- Help refine silicon designs based on needs of software
- Drive revenue through software partnerships



# Digital Life Strategy



# Typical Home Today

## *Computers, CE Are Separate Islands*



# The New Extended Digital Home

## Download / Sync

(Locally Stored for Availability Anytime)



## Around the Home

(Wired or Wireless, Native or Streamed)



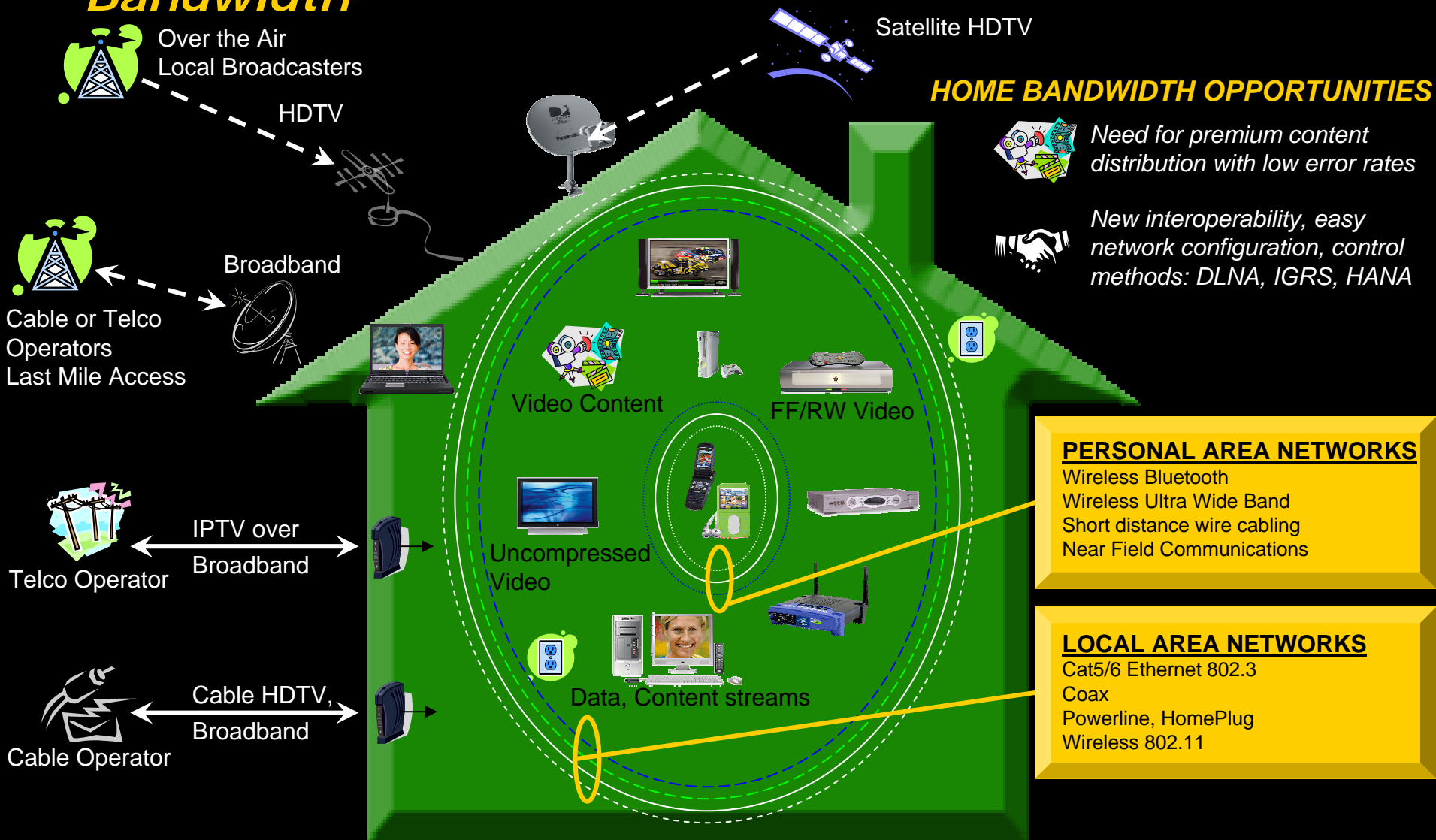
## Streaming / Online

(Wireless/Cellular)



# Catalysts To Accelerate The Market:

## Bandwidth



# Catalysts To Accelerate The Market:

## *Easily Available Content – New Business Models*

- Access to content through standard channels
- New IPTV delivery
  - Telco services
  - Microsoft Spotlights
  - Access to international TV



- Other models
  - iTunes content from Pixar, Disney, NBC-Universal, and Fox
  - Disney experiments with Free/For Fee TV
  - MovieBeam
  - Warner Bros using Bit Torrent
  - Yahoo, Google Video
  - [www.im.com](http://www.im.com), [www.meevee.com](http://www.meevee.com)





# Catalysts To Accelerate The Market:

## *Easily Usable Content – New Business Models*

- New Content Protection implementations
  - Digital Rights Management enabled services
    - *MovieLink, iTunes, CinemaNow, Vongo, LoveFilm, In2Movies*
  - Conditional Access enabled for wider range of devices
    - *OCUR – US Cable delivery to PC*
    - *Microsoft – DirecTV deal*
  - Advanced Access Content System (AACS)
    - *HD-DVD and BluRay*
    - *Managed copy for jukeboxes and portability*



- Expanded distribution
  - Sling Media - stream content from home STB or DVR
  - Dish and Archos Partnership
  - Tivo to Go, Rhapsody to Go
  - Orb personal peer-to-peer Networking



# Catalysts To Accelerate the Market:

## *New User Behavior and Awareness*

- New Music/Movies/TV Usage Models
  - How many people think to watch a movie or TV show on the train to work?
  - How many know they can listen to their music collection in their office?
  - How many think of watching TV from their home country over the Internet?
  - Who thinks to watch a home market TV in their hotel room?
  - How many moms think they could easily look at school field trip videos/photos from another parent's home media server or web page?
  - How many skip NetFlix or Blockbuster and just do MovieLink or Vongo?



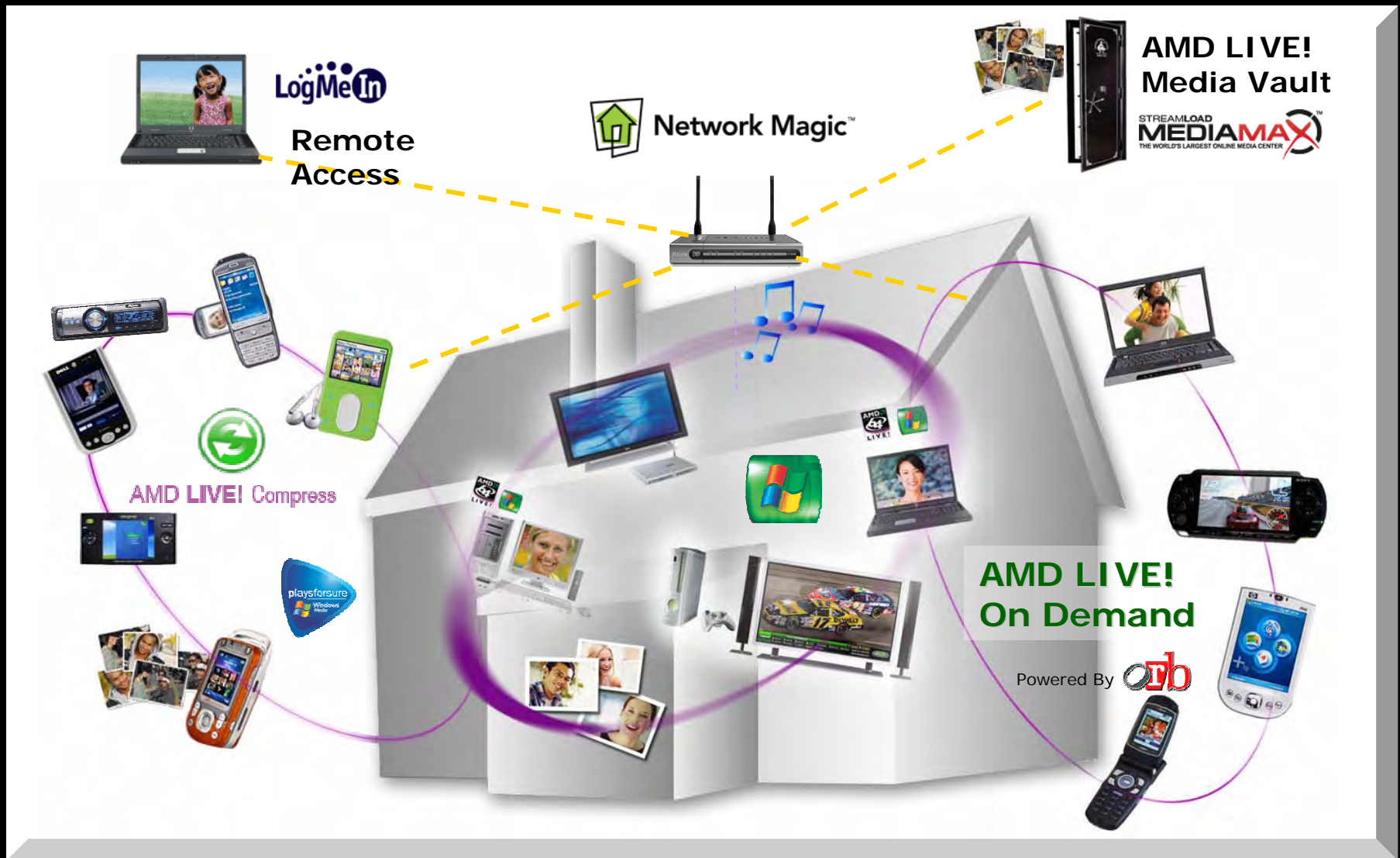


An *experience* from richly featured Media Center PCs that enhances entertainment and information on all the screens in your personal & professional world

# AMD LIVE! Strategy: Enrich and Extend the Existing Ecosystem



# AMD LIVE! Entertainment Suite In Action





# AMD LIVE! Entertainment Suite - @Launch

- AMD LIVE! On Demand
  - Supports “Entertainment Anywhere” usage model
  - Stream live TV, music, videos, photos to connected devices
  - Sync photos, videos, and TV shows to Notebook
- AMD LIVE! Compress:
  - Save up to 10 times more TV shows and movies
  - Reformats TV shows/movies to allow play on more devices
- AMD LIVE! Network Magic
  - Easily set up, manage, secure home network
  - Makes file and printer sharing easy
- AMD LIVE! Media Vault
  - Free, secure online storage
  - Automatically backs up “My Photos” and “My Music” folders
- AMD LIVE! LogMeIn
  - Allows users to remotely access their AMD LIVE! Machine
  - Move content between, install software, reboot machine, etc
  - Data migration to AMD LIVE! PC

# AMD LIVE! Online: [www.amdlive.com](http://www.amdlive.com)



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AMD LIVE!

## Smarter Digital Entertainment

Get an inside look at AMD LIVE! Watch This!



DISCOVER THE AMD LIVE! EXPERIENCE



ENHANCE YOUR AMD LIVE! EXPERIENCE



AMD LIVE! EXPERIENCE FOR PROS

## Effortless access to all things digital in your life.

Take your prized collection of TV shows, movies, music, digital photos and more. Combine them with a powerful computer and your other favorite digital electronics. Add some imaginative software into the mix and be prepared for an extraordinary experience.

The AMD LIVE! PC Experience.



Get your  
AMD LIVE! PC  
today!

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# Summary

- New media applications deliver new experiences, often require significant compute cycles
- Innovation at platform, network and in business models levels is creating demand
- Broad, open ecosystem is mandatory to satisfy many usage models
- AMD Live! products harness the evolving ecosystem to deliver a delightful experience







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